

# 2020 Solid Waste Master Plan Status Update



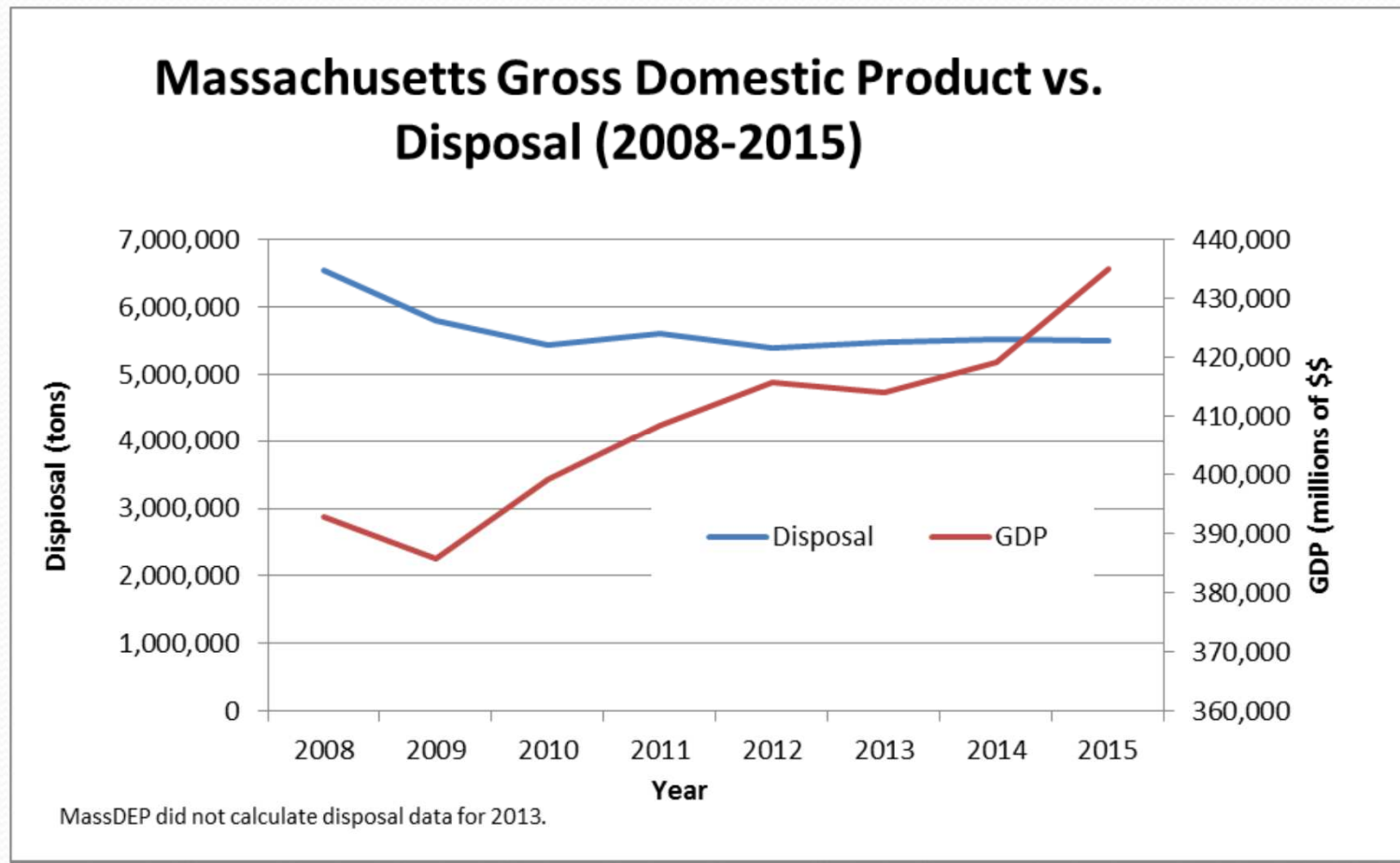
John Fischer, Mass DEP  
Solid Waste Advisory Committee  
June 22, 2017



# Overall Waste Reduction Goal

- Primary goal
  - Reduce disposal from 2008 baseline of 6,550,000 tons to 4,550,000 tons in 2020
  - As of 2015, down to 5,510,000 tons (16 % reduction)

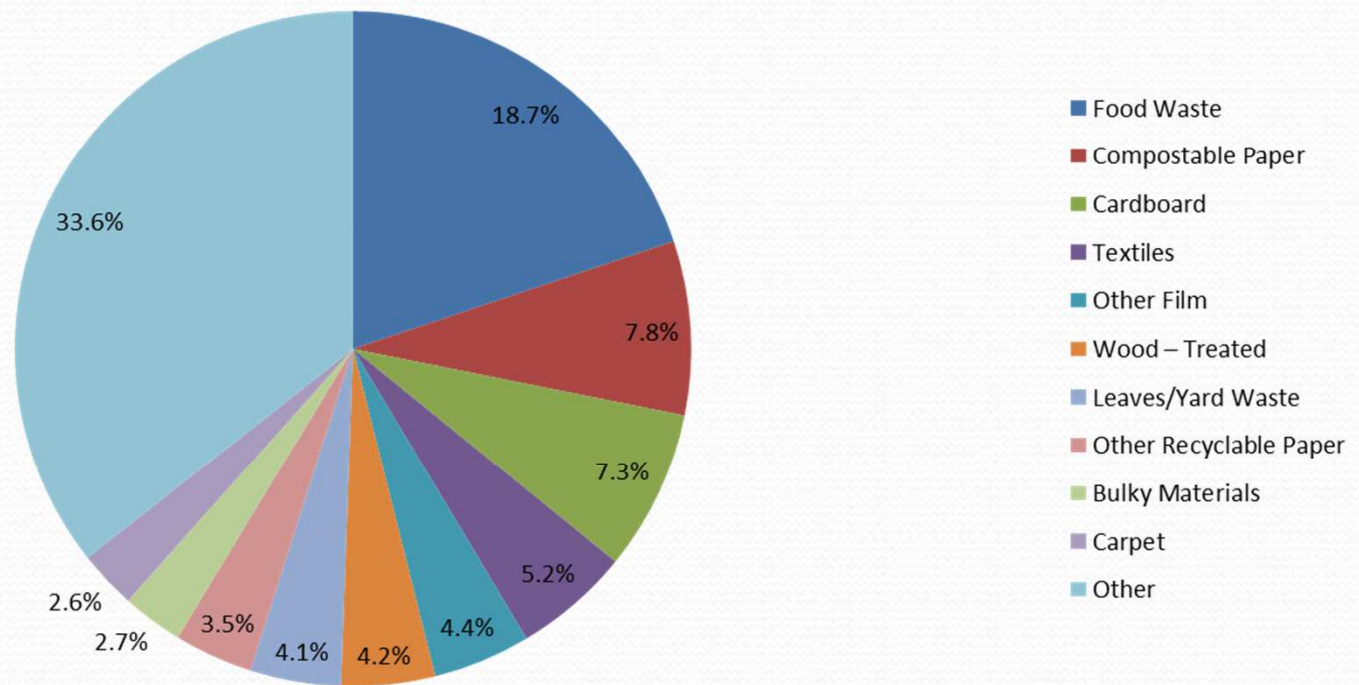
# Disposal and Economic Growth





# Waste Characterization Priorities

## Top 10 Materials in MSW - 2013





# Materials Management Capacity

- Disposal Capacity
  - 1.4 million tons in 2016 to 500,000 tons in 2021
  - Net export for disposal 500K – 1.5 million tons in 2021
- Transfer Capacity – 211 transfer stations
- 9 MRFs (many other recycling facilities)
- 17 C&D processors
- 186 MassDEP compost or AD operations
- 32 DAR registered sites taking off site food materials
- 12 building materials reuse outlets
  - (just 1 example of reuse capacity)





# Commercial Waste Reduction

- RecyclingWorks in Massachusetts
  - > 1,100 hotline calls/year
  - > 250,000 web visits
  - Direct assistance to 4,400 businesses
  - Presented at > 140 events
  - Developed extensive guidance and case studies



# Commercial Waste Reduction

- RecyclingWorks guidance for contracting with haulers
- Not Completed
  - Hauler recycling legislation – but other related work
  - Regional materials exchange completed but not successful in achieving reuse
    - Held reuse conference, developing other approaches to advance reuse
    - Key materials – food, building materials, textiles



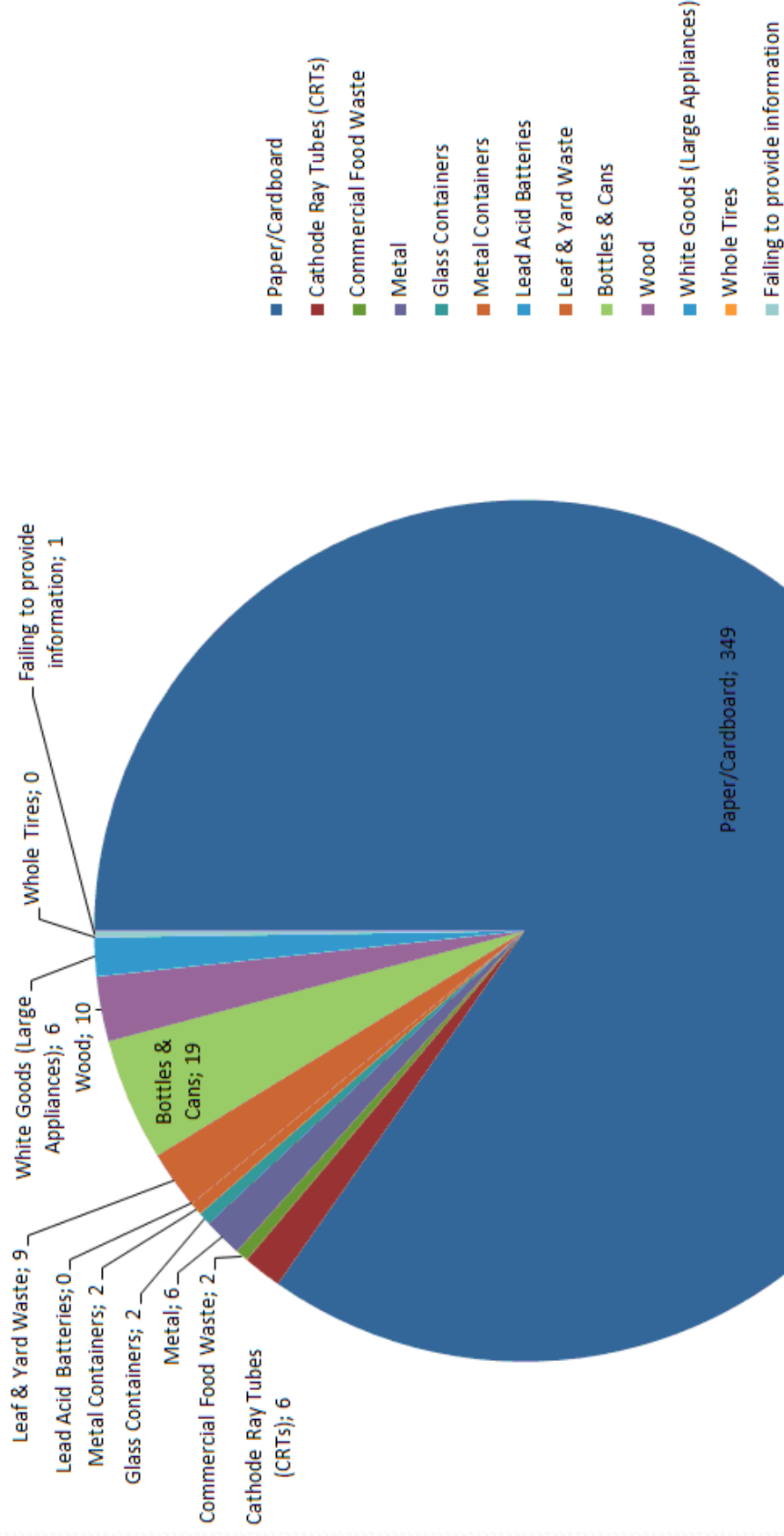


# Waste Bans Compliance

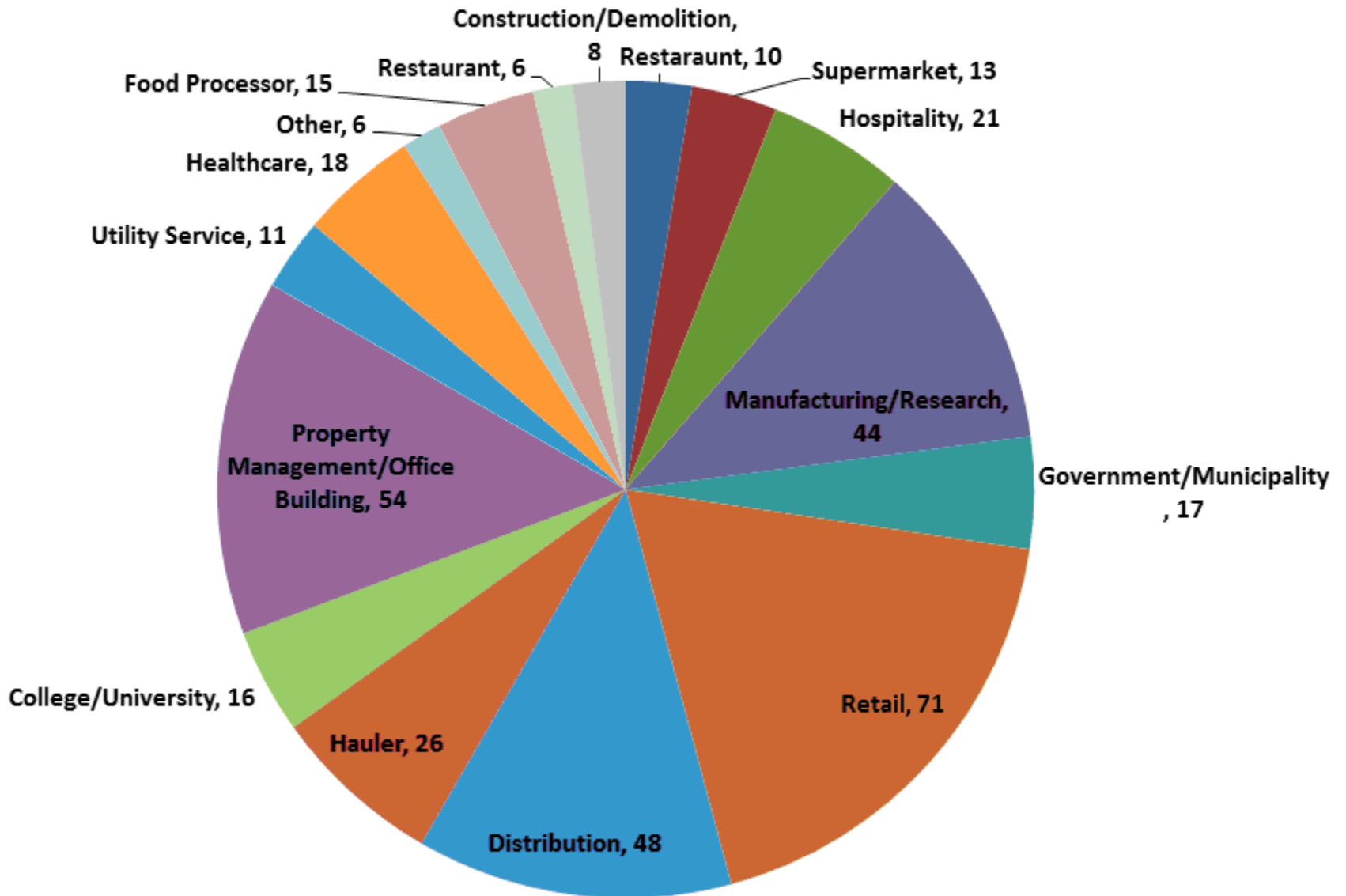
- Waste Ban Compliance (October 2013- May 2017)
  - 635 Inspections > 15,000 loads inspected
  - Failed load rates – about 17%
  - >500 NONs
  - 16 higher level enforcement with penalty
    - For repeat violations
  - Seeing increased levels of non-compliance recently



## Enforcement by Material Type



# Enforcement by Sector





# Residential: Grants/Incentives

- \$13.8 million in SMRP grants to 302 municipalities
  - Increase capture rate and program efficiency
- Pay-As-You-Throw
  - 31 % of residents in 147 municipalities with PAYT
- Recycling Dividends Program
  - 192 munis; \$3.23 million (2013-2016)
  - Rewards best practices; scaled to population served
- Schools
  - Green Team: nearly 300 participating schools/year
  - Collection infrastructure (18 grants for \$350,000)





# Residential: Target Waste Streams

- Mattresses: 40 communities; \$870k, 25,000 mattresses
- Textiles: education, \$\$ incentives, program development
- Organics: collection carts/containers for curbside; transfer stations, and school cafeterias
- Bulky rigid plastics: roll-offs and education
- Unwanted furniture, household goods, building materials: (grants for swap shops, ReStores, creative reuse)
- Difficult to Recycle materials: Beyond the Bin Directory
  - <https://recyclesearch.com/profile/ma>



# Residential: Best Practices

- Private Haulers: Best Practices/Model Recycling Regs
- Municipal Assistance Coordinators (MACs)
- Contamination in Recycling
  - Market research: recycling knowledge/behaviors
  - Pilot communities: direct intervention (Recycling Partnership grants)
- Recycling ***IQ*** Kit (***I***ncrease ***Q***uality and ***Q***uantity)
  - Open source artwork/education
  - Technical assistance/\$\$\$ for collateral materials
  - Muni, hauler, MRF collaboration





# Producer Responsibility

- No legislative action on producer responsibility
- Expanded bottle bill ballot initiative was rejected
- Need to reconsider producer responsibility in 2030 Plan
- Grants:
  - Municipal stakeholder meetings/survey identified priority waste streams for EPR
  - Surplus paint management options including PaintCare model
  - Assessment of voluntary and mandatory e-waste take-back programs





# Organics Diversion

- Organics Action Plan
  - Comprehensive approach to reduce disposal of food & other organics by 350K tons annually by 2020
- Promulgated revised regulations in 2012
  - Compost and AD facilities taking source separated materials not SW facilities
- Inter-agency grant and loan programs
  - MassCEC Organics to Energy - \$5.5 million in grants
- RecyclingWorks assistance & guidance



# Organics Diversion

- Commercial Organics Ban
  - October 2014 after extensive outreach
  - Generally high compliance – 1,800 businesses collecting
- Infrastructure Growth
  - 175K tons of AD capacity for organics
    - Projected to grow to more than 400K tons
  - 5 de-packaging/slurrying operations
  - 500 direct jobs, 900 direct + indirect
  - 2010-2016 – 150% growth
  - By end of 2017 – additional 50% growth





# Organics Diversion

- Increasing emphasis on food donation and reduction
  - Food rescue increased 36% from 2014-2016
  - Food donation BMPs and legal fact sheets
  - Food donation technical assistance
  - Guidance - reducing waste food in institutional food service





# C&D Diversion

- C&D Subcommittee
  - Reactivated C&D Subcommittee
- C&D Markets Study
  - DSM Environmental completed updated markets study
- Identify greatest additional recycling opportunities
  - Wood
  - Non-ferrous metals
  - Bulky rigid plastics
  - Carpet



# C&D Diversion

- C&D Reuse & Recycling BMPs
  - Published by RecyclingWorks in April 2017
  - Guidance on increasing construction materials reuse & recycling
- Recycling Loan Fund
  - Specified C&D materials as priority materials
- Recycling Business Development Grants
  - Specified wood and bulky rigid plastics as target materials for 2017 program





# Market Development

- Recycling Loan Fund
  - 2010-2017 to date – 28 loans for \$7.2 million
- Recycling Business Development Grants
  - Started in 2016
  - Total of 10 grants active for up to about \$1.4 million
  - Target materials specified
  - Next round closes June 30, 2017





# Leading by Example

- More than 40 environmentally preferable product contracts
- EPP purchases grew from \$5 million in 1994 to \$385 million in FY15
- Remanufactured toner cartridges – nearly \$700K annual savings
- Extensive recycling service contracts - >12,000 tons diverted in FY15



# Toxicity Reduction

- Green cleaning products contract
  - Meet 3<sup>rd</sup> party standards for environmental performance and reduced toxicity
  - Growing market - products more cost effective
  - Over \$12 million in FY16
- Toxics Reduction Task Force – EO 515
  - Furniture – reduced flame retardants & other chemicals of concern – e.g., VOCs, PVCs, anti-microbials
  - Integrated Pest Management – transparency & disclosure





# Toxicity Reduction

- Of 249 reporting municipalities:
  - 5.4 million of 6.5 million total population
  - 80% of residents access to 2 or more HHP collections
  - 98% have access to at least 1 event







# Solid Waste Facility Oversight

- Waste Ban Guidance – published 2014
  - Lowered several material action levels
  - Expanded 3<sup>rd</sup> party inspection requirements beyond six waste combustors
- SW Facility failed load data
  - 2013 – 2.3<sup>0</sup>%
  - 2016 – 1.2<sup>0</sup>%
- 3<sup>rd</sup> Party Data
  - 2013 – 4.2<sup>0</sup>%
  - 2016 – 2.0 %





# Solid Waste Facility Oversight

- MWC Moratorium
  - No facilities built nor proposals submitted for 350K tons of advanced waste to energy capacity
- No integrated waste management facilities built (i.e., like Nantucket)
- Tightening emission regulations for MWCs
- Closed LF monitoring/maintenance
  - Updating plans for landfills after initial 30 years
- Landfill renewable energy projects – 1<sup>st</sup> in the nation!
  - 90 permitted for 207 megawatts
  - 56 operating at 124 megawatts





# Next Steps

- October 2017 SWAC meeting
  - develop 2030 SWMP ideas and proposals
- January and April 2018
  - develop 2030 SWMP framework
  - Additional subcommittee meetings TBD
- Questions or Additional Information
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